Nebraska Department of Agriculture
Bureau of Plant Industry
Pesticide Program

Pesticide Technical Interpretation

PTI-1.1: Intermittent Streams

Updated: January 2007

Background:

Pesticides having a greater than normal tendency to be transported off the target site may have label language that indicates they should not be applied in or near intermittent or perennial streams or impounded water. These label statements are intended to protect surface and groundwater from pesticide contamination, and are fully enforceable under the Nebraska Pesticide Act (NPA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). This Technical Interpretation defines what an intermittent stream is for the purpose of administering the NPA and FIFRA. Pesticide applicators should be familiar with this interpretation before applying pesticides that have label language requiring setbacks or buffer zones for intermittent streams.

Interpretation:

Intermittent Streams have flowing water during certain times of the year when seepage from perched water tables, saturated areas, or other groundwater sources provide stream flow in addition to that which occurs from melting snow or runoff from rainfall events. Runoff from rainfall is a supplemental source of water for stream flow. Intermittent streams have surface water in the channel for extended periods of time. This will normally result in a scoured or non-vegetated channel bottom. Depending on the time of year, the water may be flowing or occur in isolated pools. Drainage systems which are not fed by seepage from perched water tables, saturated areas, or other groundwater sources, and only carry water during and for a short time after precipitation events are classified as *ephemeral streams*. Ephemeral streams do not meet the definition of intermittent streams for purposes of pesticide applications and, therefore, are not subject to setbacks or buffer zones required for intermittent or perennial streams. It is important to note that some intermittent streams have been channelized and routed into roadside ditches, thus making the ditch an intermittent stream.

Any person attempting to determine if a stream bed or drainage area is classified as intermittent or ephemeral should take the following into consideration:

1. Determine if there is water in the stream bed or drainage. If flowing water is present, the site should be considered an intermittent stream. If there is no flowing water present, proceed to Step 2.

2. Is the stream bed or drainage classified as a “three-dot stream” by a U.S. Geological Survey (USGS) topographical map? If so, compare the site conditions to the definition criteria listed above. If not, do not automatically assume the site is not an intermittent stream. If the site in question is classified as a three-dot stream, but has no surface water or other characteristics typical of an intermittent stream, use the information below to determine the classification.

3. Useful resources to determine stream classifications are local NRD stream determinations, the DNR’s well registration, and/or groundwater level databases found on their Interactive Maps at (www.dnr.ne.gov), or other local experts. Other resources to help reduce pesticide impacts on water resources are listed below.

Other Resources:

- Nebraska Natural Resources Districts Directory (http://www.nrdnet.org).
- University of Nebraska's Guide for Weed Management in Nebraska (http://ianrpubs.unl.edu/fieldcrops/ec130.htm). This document contains a considerable amount of information on herbicides and chemical properties that affect off-site movement.
- The USDA NRCS's Windows Pesticide Screening Tool (WIN-PST) allows users to compare pesticides using site specific conditions for off-site movement potential, and adjust their management decisions accordingly. This software can be found at (http:www.wcc.nrcs.usda.gov/pestmgt/).
- University of Nebraska publications (http://ianrpubs.unl.edu/water) which provide information on protecting our valuable water resources from pesticide contamination. Among some of the many publications available, two in particular are helpful to pesticide users: Best Management Practices for Agricultural Pesticides to Protect Water Resources (G93-1182-A), and Agricultural Management Practices to Reduce Atrazine in Surface Water (G96-1299-A).
- Electronic images of USGS topographic maps can be found at the University's Conservation and Survey Division's web site (http://csd.unl.edu/general/drgdownloads.asp). You can also use the University's map server found at (http://neview.unl.edu/mserv/maps/viewer.htm).
- USDA NRCS Field Office Directory at: (http://offices.sc.egov.usda.gov/employeeDirectory/app).

For additional information or help with determining stream classification, you can reach the NDA's Pesticide Program at (402) 471-2394

Fine Print:

Title 25, Chapter 2, Nebraska Administrative Code, §010 states:
"Technical Interpretations. Pursuant to §2-2626(3)(f) of the Pesticide Act, the Department may, as it deems necessary or appropriate, issue technical interpretations that provide further guidance and policy on the use of pesticides to minimize or mitigate potential or documented negative impacts on humans or the environment." Section 010.02 states that technical interpretations shall provide guidance regarding use inconsistent with the pesticide label as set forth in 007.01D.

References to material not prepared by NDA in this document should not be considered an endorsement by NDA, nor is NDA responsible for the content of referenced material.

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